Roles of stem cells in the treatment of Parkinson's disease

Y. Ebrahimikia[1], Sh. Darabi[2], F. Rajaei[2]

[1] Student Research Committee, Qazvin University of Medical Sciences, Qazvin, Iran
[2] Cellular and Molecular Research Center, Qazvin University of Medical Sciences, Qazvin, Iran

Corresponding Address: Shahram Darabi, Cellular and Molecular Research Center, Qazvin University of Medical Sciences, Qazvin, Iran
Tel: +98-28-33336001; Email: shahram2005d@yahoo.com
Received: 15 Apr 2018; Accepted: 13 Jun 2018

Abstract

Stem cells are undifferentiated cells with the ability to divide and differentiate into distinct cell types. The source of these cells is from embryos and adults, that each cell has its own specific characteristics. For nearly decades, experimental studies have been conducted to use these types of cells to treat various diseases. Parkinson's disease is one of the most common neurodegenerative diseases, resulting in a deficiency of dopaminergic neurons. Therefore, we study the role of stem cell therapies in the treatment of Parkinson's disease. Initially, 73 relevant articles selected from valid databases such as ISC, SID, Google Scholar and PubMed and the role of each type of stem cell in the treatment of Parkinson's disease was collected**.** Stem cells can be used in experimental studies regard to the unique characteristics and using different laboratory agents for any particular type of cells. Stem cells can provide an unlimited source of dopaminergic neurons for transplantation and improve motor behavior and symptoms of Parkinson's disease. Study and comparison of different types of stem cells refer to the more effective role of neural and umbilical stem cells in treating Parkinson's disease.

Keywords: Stem cells, Parkinson's disease, Dopaminergic neurons
Citation: Ebrahimikia Y, Darabi Sh, Rajaei F. Roles of stem cells in the treatment of Parkinson's disease. J Qazvin Univ Med Sci 2018; 22(4): 83-99.